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English Students' Perceptions of Using Machine Translation Yandex Tools in Final Project Writing

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A B S T R A C T

The rapid advancement of artificial intelligence (AI), particularly machine translation (MT) tools, has increasingly influenced the academic writing practices of English as a Foreign Language (EFL) students. This study explored EFL students' perceptions of using machine translation, specifically Yandex Translator, in completing their undergraduate final projects. A qualitative descriptive approach was employed involving eighth-semester students of the English Education Program at Universitas Negeri Semarang. Data were collected through questionnaires and semi-structured interviews and analyzed using thematic analysis. The findings indicate that students generally view machine translation as a useful and accessible tool for academic writing. Participants reported using Yandex Translator to understand unfamiliar vocabulary, improve grammatical accuracy, interpret academic sources, paraphrase texts, and organize ideas more effectively. They also perceived that the tool helped increase their confidence and supported the overall writing process. However, several challenges were identified, including inaccurate contextual translations, overly literal renderings, and the risk of excessive dependence on the tool. Despite these limitations, students considered machine translation beneficial when used critically and combined with their own language knowledge. The study concludes that machine translation can effectively support EFL students' academic writing, although careful human evaluation remains essential to ensure accuracy and academic quality.

Keywords: *Students' Perceptions Machine Translation, Academic Writing, Final Project Writing Translation Tools*

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INTRODUCTION

In recent years, the rapid development of artificial intelligence (AI), particularly machine translation (MT), has significantly influenced English as a Foreign Language (EFL) students' academic writing practices. MT tools such as Google Translate, DeepL, and Yandex Translate are widely used for their accessibility and to assist with translation, improve grammar, and support idea generation. As a result, these tools have become an integral part of students' strategies in completing academic tasks, including final project writing. The rapid development of machine translation (MT) and generative artificial intelligence (GAI) tools has changed the landscape of English for Academic Purposes (EAP) teaching and assessment (Trang, 2024). MT is the study of how to use computers to translate between languages (H. Wang et al., 2022).

Machine translation, commonly known as MT, can be defined as "the translation of a natural language (source language (SL) into another language (target language (TL) using a computerized system, with or without human assistance (Chéragui, 2012). Because natural languages are inherently complex, it is difficult to hide all language violations using manual translation rules. With the advent of large-scale parallel corpora, data-driven approaches to learning linguistic information from data have attracted increasing attention (Tan et al., 2020).

Among AI-based tools, machine translation (MT) has become an essential resource for writing in second and foreign languages (L2) due to its accessibility and ease of use (Yuasa &

Takeuchi, 2025). In the writing context, several studies have highlighted the role of MT tools in supporting students' writing process. Zona & Kusmaryani (2025) found that MT tools help students generate ideas, structure sentences, and reduce language barriers when writing in English. In the same spirit, reports that students rely on MT tools to improve the quality of their writing, especially in terms of grammatical accuracy and vocabulary selection (Skripsi, 2025).

Additionally, Y. Wang et al., (2025) point out that the use of MT in academic writing is closely related to students' perceptions of usefulness and ease of use, which significantly influence their acceptance of the technology. These studies indicate that MT tools are widely perceived as useful for supporting academic writing, including the preparation of final projects. Other studies, such as Ata & Debreli, (2021), also highlight that students frequently rely on MT due to its ease of use and efficiency. However, several researchers have raised concerns regarding overdependence and the potential negative impact on students' critical writing skills (Yudianto et al., 2025s;Trang, 2024).

Previous studies have mainly focused on widely used tools such as Google Translate and DeepL, which are considered effective, fast, and easy to use (Asmara & Kembaren, 2024) . According to Sagita et al., (2021), the study found that students used the Google Translate tool, which helps them translate, in dictionary form, check synonyms and antonyms, as well as check pronunciation, with the majority of students having a positive perception of its use.

Additionally, research on AI-powered writing tools, such as Grammarly and other automated systems, provides further insight into students' perceptions of academic writing. (Zuhriah et al., 2024) found that students perceived AI tools as helpful for improving the quality of their paper writing, especially grammar and clarity. However, we also acknowledge certain limitations, such as a lack of contextual accuracy and overreliance. This is consistent with extensive research showing that students tend to think critically about technology and recognize both its benefits and limitations.

Show that a significant number of students strongly agree with the use of translation software in various language learning contexts and perceive it as a valuable tool for improving language skills and facilitating communication with foreign teachers. However, some students also express dissenting opinions, suggesting that translation software may not be the optimal method for learning and improving English proficiency (Y. Yang et al., 2023).

There is a strong positive correlation among students' perceptions of translation software, their intention to use it, and their actual use. This suggests that when students are aware of the benefits of these tools, they are more likely to incorporate them into their learning practices. This study highlights the importance of teaching students to use translation software deliberately and rationally to improve their language skills while avoiding over-reliance on it (Y. Wang et al., 2025).

Similarly, Asmara & Kembaren (2024) and Nusantara & Izzah (2024) reported that MT tools are considered practical and helpful for thesis writing. However, some studies have also confirmed negative perceptions of MT dependence and the low accuracy of translation results (Trang, 2024; Mentari, 2025). Moreover, most studies continue to focus on the use of AT in general learning and simple tasks rather than in the more academically demanding context of graduate thesis writing.

Recent research highlights the growing role of machine translation in academic settings Klimova (2025) argues that research on MT mainly focuses on its pedagogical applications and users' perceptions of its effectiveness. Additionally, several studies show that students actively use MT to complete reading, writing, and translation tasks (Alm & Watanabe, 2022;Rahmawati et al., 2025). Machine translation automates the translation process, and CAT (computer-aided translation) tools assist human translators to improve efficiency and accuracy. Citing Hutchins' definition of machine translation, the authors highlight MT's limitations, noting that it often produces translations with errors that an experienced human translator would avoid. This distinction provides a basis for investigating

students' attitudes toward CAT tools intended to support, rather than replace, human interpreters (Khatim, 2022).

To overcome these difficulties, EFL scholars often use various strategies and tools to improve their English writing. In recent years, machine translation (MT), particularly neural network (NN)-based machine translation engines such as Google Translate and DeepL, has emerged as a potentially valuable tool in this regard (Comelles & Laso, 2025). To reduce time requirements, several automated tools have been developed and continue to be developed to assist with the key steps of systematic reviews, such as designing and conducting database searches, validating search results, extracting data, conducting meta-analyses, and documenting study results (Scott et al., 2021).

Recent studies have highlighted an increasing focus on students' perceptions of machine translation (MT) tools in the English as a Foreign Language (EFL) context, particularly in academic writing. A study by Rahmawati et al., (2025) found that undergraduate students generally have positive perceptions of machine translation tools, as they help improve vocabulary, grammar, and overall understanding of writing tasks. Despite the growing body of research, most previous studies have focused primarily on the general classroom use of MT tools or on basic writing tasks. The use of Machine Translation (MT) in more complex, large-scale academic contexts, such as graduate projects and undergraduate dissertations, has received less attention. Furthermore, few studies have investigated in detail why students rely on MT tools and how these tools are actually integrated into the writing process.

Researcher Mentari (2025) emphasized the importance of evaluating machine translation not only for linguistic accuracy but also for readability, particularly in texts that contain important cultural terms. Overall, this study provides valuable insight into the effectiveness of various machine translation approaches and highlights the need for further technological developments to successfully address the complexities of cultural translation.

This study highlights the effectiveness of post-editing in improving the quality of Machine Translation. GNMT (Google Neural Machine Translation) produces better initial results and is easier to edit than YNMT (Yandex Neural Machine Translation), but both tools produce nearly "very natural" translations after human post-editing. Research into this phenomenon reveals weaknesses in the studies that require further investigation. Despite the growing body of research on Machine Translation, several gaps remain. Most previous studies have focused on widely used tools such as Google Translation and DeepL, while research on Yandex Translator is still limited. In addition, many studies use a quantitative approach and offer only general conclusions, with limited exploration of students' in-depth experiences. Furthermore, studies that specifically investigated Machine Translation in the context of translation education remain rare (Adawiyah et al., 2023).

Therefore, this study aims to fill this gap by focusing on English Language Students' writing of their Final Projects. The purpose of this study is to investigate students' perceptions of Machine Translation tools. This includes how the tools are used, why they are used, and the perceived benefits and challenges associated with creating the Final Project. By focusing on this specific academic context, this study aims to provide a more comprehensive understanding of the role of MT tools in supporting or potentially developing students' academic writing. To achieve this objective, the following research questions are formulated: (1) What types of Machine Translation Tools are commonly used by English Students' in writing their Final Projects or Articles? (2) What are the reasons behind Students' use of Machine Translation Tools in Academic Writing? (3) What are the benefits and challenges faced by students when using Machine Translation Tools? (4) Why do students prefer to use Machine Translation Tools when writing their Final Papers?

METHOD

Research Design

To investigate how English Students felt about using Machine Translation (MT), namely Yandex Translate, when completing their Final Projects. This study used a qualitative descriptive research approach. The reason this design was selected is that it enables the researcher to gain a comprehensive understanding of Students' attitudes, beliefs, and experiences with MT technologies. Without changing any variables, the study aims to comprehend usage patterns, motivations for use, and perceived advantages and difficulties in a natural setting.

Participants

This study's participants were eighth-semester students in the English Language Education Program at Universitas Negeri Semarang who were currently working on their Final Projects. Participants had to have prior experience with Machine Translation systems, specifically Yandex Translate or comparable platforms, according to the selection criteria. Because they are actively involved in academic writing and are likely to employ MT tools in high-stakes writing situations, these individuals were deemed suitable.

Instruments

The 30 questions in the online survey, administered via Google Forms, were a combination of open-ended and closed-ended (e.g., Likert and Multiple-choice) questions. While open-ended questions enable respondents to elaborate on their reasons for use, perceived benefits, and obstacles, closed questions are intended to measure students' frequency of use, the types of Machine Translation tools they use, and their overall perception. To ensure content validity, the survey items were developed based on the research objectives and relevant literature on technology acceptability and the use of Machine Translation in Academic Writings.

Purposively chosen participants participated in semi-structured interviews to augment the survey data and deepen the research. Probing questions about students' experiences and attitudes, and critical comments on the use of Machine Translation tools, particularly in reference to the creation of their Final Projects, were part of the interview process. This adaptable framework enables participants to explore and improve their responses while preserving uniformity. To ensure data accuracy and completeness, all interviews were performed via WhatsApp calls with participant consent, audio-recorded, and supplemented with field notes. The integration of these tools improved the validity of the findings and facilitated data triangulation.

Data Analysis

All survey responses (both closed-ended and open-ended) and interview notes were gathered, verbatim transcribed, and thoroughly reviewed many times as part of the data preparation and distribution phase of the research. To fully understand students' opinions and experiences with Machine Translation techniques, this stage aimed to immerse the researcher in the data.

After that, the researcher conducted preliminary coding by identifying data units that were significant and pertinent to the study's goals. Inductive coding was used to code open-ended survey questions and interview transcripts, allowing patterns to naturally arise from the data rather than being imposed beforehand. To validate and contextualize the qualitative findings, questionnaire responses were collected and analyzed descriptively (e.g., frequencies and percentages).

The following stages involved developing themes and classifying related codes into more general categories that represented significant facets of the study. These categories were further broken down into major themes, including how students use machine translation

tools, the primary motivations for their use, reported advantages (such as vocabulary expansion and grammar support), and perceived difficulties (such as contextual inaccuracy and overconfidence). This procedure ensures that the themes align with the study question and accurately reflect the dataset.

The themes were then examined and verified by the researcher to ensure internal coherence and distinct differences. To improve reliability, survey and interview data were triangulated. Any disparities were thoroughly investigated and analyzed. To further strengthen the analysis's depth and reliability, representative passages from participants' responses were selected to support each topic.

The analysis then proceeded to interpretation and reporting, in which the identified themes were methodically presented and debated within the framework of previous research and theoretical viewpoints. This stage not only presented the findings but also provided crucial insights into how and why students use machine translation tools in their academic work. All things considered, this methodical analysis process ensured that the findings were legitimate, trustworthy, academically sound, and in line with the standards of top-notch scientific publications.

FINDINGS AND DISCUSSION

The purpose of this study was to find out how English Students' felt about utilizing Yandex Translator and other machine translation (MT) programs for their Final Projects. Open-ended questionnaires and semi-structured interviews with students enrolled in English Language education programs were used to gather data. To identify recurrent themes in students' experiences, motivations for using machine translation systems for academic writing, perceived advantages, and difficulties, the results were subjected to a thematic analysis. The research revealed four major themes. (1) The ways in which students use machine translation tools; (2) The motivations for their use; (3) The perceived advantages of these tools; (4) The difficulties and constraints associated with their use.

Students' Patterns of Using Machine Translation Tools

The findings demonstrated that students regularly employ machine translation software in their academic writing, particularly when preparing Final Projects. The majority of respondents to the poll stated that they frequently translate and revise words, phrases, paragraphs, and scientific papers using machine translation techniques. According to the poll results, students frequently utilize a variety of machine translation services, including Yandex Translate, DeepL Translate, and Google Translate. The majority of participants concurred that machine translation tools are useful, simple to use, and supportive of academic writing. Although Yandex Translate was the main focus of this study, users also acknowledged utilizing DeepL and Google Translate. The majority of students stated that they frequently use machine translation tools for vocabulary translation, understanding scholarly references, text rephrasing, and grammar improvement.

For their everyday academic demands, a number of participants said Yandex Translate was practical and simple to use. Maurizka claimed that Yandex Translate provided him with examples of phrase patterns and helped him swiftly translate words, sentences, and documents. Additionally, she claimed that the website loads more quickly and has a more pleasing appearance than Google Translate. According to Windi, Yandex Translate is useful for routine translation because it offers extensive options for translating words, sentences, and documents. Tahtida also reported a pleasant experience, noting that when Yandex Translate translated text from scanned images, it produced clear, easy-to-read results and translated paragraphs more quickly. For several translation assignments, she claims the picture translation tools outperformed Google Lens.

The findings also demonstrated that, to produce more accurate translations, students frequently compared the outputs of several machine translation technologies. While Yandex,

April clarified. While DeepL offers more sophisticated capabilities, such as synonym suggestions that can be adjusted right within the platform, the translator is simple to use.

The results of the interviews also demonstrated that students used Machine Translation tools as writing help, in addition to translation tools. According to Ainun, he typically chooses DeepL since the translations are clearer and more scholarly. Additionally, he clarified that DeepL is helpful because it lets you translate documents and photos directly without manually entering text. After a friend introduced her to Yandex Translate, she started using it, but she still preferred DeepL since Yandex Translate appeared too simple and inadequate for her writing needs.

Fiyya stated that she frequently utilized Yandex Translate, DeepL, and Google Translate during this period. These resources improved my comprehension of academic document phrases and helped me grasp difficult vocabulary. Overall, the findings show that Machine Translation tools are now a crucial component of students' academic writing practices and are frequently used to support writing.

Reasons for Using Machine Translation Tools

The second issue is the motivations for students' employment of Machine Translation Tools in their Final Projects. The findings demonstrated that students used MT technologies because they believed they were quick, practical, and helpful for overcoming language barriers. Most participants admitted that writing academic documents in English is not easy because English is considered a foreign language. Therefore, machine translation tools have become an alternative solution to reduce language barriers. Fiyya explained that she uses machine translation tools because they quickly translate complex vocabulary and help her write academic papers. Similarly, Dewanti said Yandex Translator is easy to understand, efficient, and user-friendly. She also said that although she has been using DeepL for a long time, she still feels that Yandex Translate is better than Google Translate because Google Translate can sometimes produce inaccurate translations.

Another reason cited for the results is efficiency. Students felt that machine translation tools saved time during the writing process. Tahtida said that Yandex Translator translates paragraphs faster and even gives good results when translating text from images. Additionally, several students appreciated the accessibility of these tools, as they could be used on smartphones and laptops.

Students prefer Machine Translation programs that provide general, natural, contextually relevant translations, according to the interview. According to Yaya, Yandex Translate is helpful because of its easy-to-use interface and speedy translations into several languages. She did, however, think that the translations occasionally lacked the naturalness of DeepL, particularly when it came to complicated statements or Specific.

Perceived Advantages of Machine Translation Tools for Writing Final Projects

The findings demonstrated that students' opinions of Machiavellian Transactional systems are generally favourable. Increased vocabulary was one of the most often mentioned advantages. Students felt that the machine translation tool introduced them to unfamiliar academic terminology and helped them better understand English texts. According to survey responses, most participants agreed that machine translation tools can help them understand complex texts, improve grammar, and find appropriate vocabulary for academic writing. Additionally, the majority of respondents said that machine translation tools have improved the quality of their writing and increased their confidence when writing academic documents in English.

Additionally, participants said machine translation tools helped them improve their grammar and sentence structure. Several interviewees explained that machine translation tools provide alternative sentence models that help organize ideas more effectively. For example, Galuh said Yandex Translator creates a vocabulary that is easier to understand and

less rigid than Google Translate. Similarly, Mayya said that Yandex Translate is useful because its translations are easy to understand and supported by features such as image translation and voice memo translation.

Additionally, students reported feeling more confident when writing academic papers in English after using Machine Translation techniques. Ainun stated that Machine Translation technologies have streamlined the translation process, enabling users to directly translate documents, photographs, or copied text without manually entering everything. Fiyya clarified that Yandex Translate helped them increase the quality of their work.

Writing efficiency is another significant advantage that research has shown. Participants observed that employing Machine Translation Tools on English-language magazine articles or translating lengthy paragraphs. Students also valued the tool's additional features, such as image, audio, and document translation, which made it more practical and feature-rich. These findings show how important Machine Translation Tools are for helping students finish academic writing assignments more quickly and confidently.

Challenges and Limitations in Using Machine Translation Tools

Despite the encouraging comments, the findings also identified several problems and limitations in the application of Machine Translation software. Contextual inaccuracy was one of the most often reported issues by participants. According to some students, Yandex Translate occasionally generated literal translations that sounded strange, particularly in academic settings.

According to Indah, users had to manually edit and reword some of the translations generated by Yandex Translate since they sounded too professional and featured jargon. She added that, unlike translations produced by QuilBot Translator, phrase patterns often appear stiff. In a similar vein, Nana pointed out that Yandex Translate often translates lengthy academic passages literally and makes grammatical mistakes that need correction. Another issue that emerged from the results was the lower translation quality compared to other machine translation tools, such as DeepL. April explained that DeepL provides better language quality and a more natural sentence structure than Yandex Translate. Farid also said that Yandex Translator still lacks flexibility, as it relies heavily on word-for-word translation, making it less suitable for EFL students who need more contextually and naturally translated content. Additionally, Erry explained that while Yandex Translator is useful for translating short sentences and terms, it still has shortcomings when it comes to accurately translating parts of speech and sentence structure.

Additionally, several participants expressed concerns about over-reliance on machine translation tools. Survey results also revealed that some respondents admitted to relying heavily on machine translation tools during the writing process. Most participants agreed that over-reliance on machine translation tools can reduce students' independent writing and critical thinking skills if translation results are accepted without verification or evaluation. Students acknowledged that over-reliance on MT tools can reduce their independent writing and critical thinking skills. Participants therefore emphasized the importance of checking and correcting translation results before using them in academic documents. Overall, the results show that while students view machine translation tools positively, they also recognize the importance of critically evaluating translation results to avoid contextual inaccuracies and over-reliance on technology.

Discussion

The results of this study indicate that English learners have generally positive attitudes toward using machine translation tools in their final drafts. Students perceived machine translation tools as practical, accessible, and supportive technologies that helped them overcome language barriers during their academic writing.

Early results show that students frequently use machine translation tools such as Yandex Translate, Google Translate, and DeepL to translate vocabulary, improve grammar, understand scientific references, and organize text. These findings are consistent with the study by Rahmawati et al., (2025), which found that undergraduate students commonly use Machine Translation Tools to support their writing and improve their understanding of English texts. Similarly, (Zona & Kusmaryani, 2025) pointed out that MT tools can help students generate ideas, structure sentences, and reduce the difficulties of academic writing.

The findings also show that students' opinions about MT tools' utility and usability significantly affect how often they use them. This lends credence to the technology acceptance model (TAM) put forth by earlier research, particularly that of (H. Yang & Liu, 2024), who assert that people are more likely to adopt a technology when they believe it is practical and easy to use. Students in this study believed that the MT tools improved their productivity and made the process of producing their Final Project easier.

The advantages of Machine Translation technologies for enhancing vocabulary and grammar are another significant discovery. When creating English sentences, students reported that the MT tools offered grammatical guidance and introduced new technology. These findings align with a prior investigation conducted by (Asmara & Kembaren, 2024). They discovered that students believed Machine Translation technologies helped them write better papers, particularly in grammar and vocabulary.

Students also stated that using Machine Translation technologies boosted their confidence when writing academically. These results demonstrate that Machine Translation Tools reduce students' anxiety when composing English texts by acting as a psychological support system in addition to translation technology. This is consistent with the findings of (Yuasa & Takeuchi, 2025), who contend that students' use of Machine Translation Tools is associated with favorable emotional responses and enhanced writing confidence.

Nevertheless, this study also found problems with the application of Machine Translation techniques, despite the favorable comments. Contextual inaccuracy was one of the primary issues found. In academic settings, students indicated that translations generated by Machine Translation systems were occasionally grammatically correct but conceptually incorrect. (Mentari, 2025), who pointed out that Machine Translation technologies still have problems when interpreting context-dependent and culturally complex utterances, supports this conclusion.

Concerns regarding pupils' over-dependence on Machine Translation technologies were also raised by the results. Some participants realized that relying too much on MT technologies could make them less motivated to learn how to write on their own. This outcome supports the claims made by (2024) and Yudianto et al., (2025), who emphasized the drawbacks of excessive reliance on Machine Translation technology in language learning.

The study's conclusions also highlight the importance of critical thinking when using Machine Translation software for academic writing. Students still need to carefully assess and edit translation results even if MT technologies offer substantial efficiency and language support. In this situation, Machine Translation ought to be viewed as an aid rather than a substitute for students' linguistic abilities.

Overall, this study demonstrates that EFL students' academic writing skills now heavily rely on Machine Translation systems. This research adds to the expanding body of knowledge on technology-assisted writing and emphasizes the advantages and drawbacks of Machine Translation systems in crucial academic settings, such as Final Project writing. To improve learning outcomes while reducing reliance on technology, this study also recommends that educators help students use Machine Translation critically and responsibly.

CONCLUSION

This study investigated EFL students' perceptions of using Yandex Translate as a machine translation tool in completing their undergraduate final projects. The findings

revealed that students generally held positive perceptions of machine translation due to its accessibility, efficiency, and usefulness in supporting various aspects of academic writing. Students used the tool to translate vocabulary, improve grammatical accuracy, understand academic references, paraphrase content, and organize ideas more effectively during the writing process. The study also found that machine translation contributed to students' writing development by increasing their confidence, enhancing writing efficiency, and supporting improvements in vocabulary, grammar, and sentence construction. In addition, features such as document, image, and voice translation provided practical assistance that facilitated the completion of academic tasks. Despite these benefits, students recognized several limitations, including contextual inaccuracies, literal translations, and the potential risk of becoming overly dependent on the technology. Such challenges highlight the importance of critically evaluating machine-generated output before incorporating it into academic work. The findings suggest that machine translation has become a valuable support tool for EFL students' academic writing. However, its effectiveness depends on students' ability to use it responsibly, critically assess translation results, and combine technological assistance with their own language knowledge to maintain accuracy, academic integrity, and independent writing skills.

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